

IN THE CLAIMS:

1. A centralized notification system for over the air messaging, comprising:
 - a central server that generates a message to be delivered to a mobile device; and
 - an active server in communication with the central server that receives the message from the central server, the active server in communication with a network element that that communicates with the mobile device, wherein the active server queries the network element to determine availability of the mobile device, wherein:
 - if the availability of the mobile device is returned from the network device, directly routing the message to the mobile device;
 - otherwise, routing the message to a passive server; and
 - wherein the passive server monitors message traffic for an event that provides availability information about the mobile device and automatically delivers the message to the mobile device in response thereto.
2. The centralized notification system recited in claim 1, further comprises logging results of the delivery of the message in a history database.
3. The centralized notification system recited in claim 1, wherein the availability is determined from an echo registration of a registration generated from a mobile device.
4. The centralized notification system recited in claim 3, wherein the echo registration is created and made available at a signal transfer point (STP).
5. The centralized notification system recited in claim 1, wherein the passive server receives the availability information about the mobile device without querying the HLR.

6. The centralized notification system recited in claim 1, wherein the message are created in response to various parameters, including implementing at least one of: administration changes to an intelligent routing database; a system change to a subscriber's profile; and changes by an accounting system server.

7. The centralized notification system recited in claim 1, wherein the central server generates and delivers the message to an active server in response to a new activation of a mobile device.

8. The centralized notification system recited in claim 1, wherein the at least one server includes multiple passive servers functionally servicing a geographic region.

9. The centralized notification system recited in claim 8, wherein the passive servers are distributed nationally.

10. The centralized notification system recited in claim 9, wherein the passive servers are distributed worldwide.

11. The centralized notification system recited in claim 1, wherein the event from which availability information is obtained is chosen from at least one of: monitoring individual cell towers; monitoring an STP; monitoring a server; and monitoring traffic between an MSC and an HLR.

12. A method for managing over the air programming to a mobile device, comprising:

generating a message in a central server that is to be downloaded to the mobile device;

delivering the message to an active server; and

querying a network element for availability information about the mobile device, wherein:

if the availability of the mobile device is positive, directly routing the message to the mobile device,

otherwise, routing the message to a passive server, wherein the passive server monitors message traffic for an event that provides availability information about the mobile device; and

downloading the message to the mobile device in response to receiving the availability information.

13. The method of claim 12, further comprises:

determining availability information from an echo registration that is automatically sent to the passive server, wherein the echo registration is a copy of a registration generated from a mobile device.

14. The method of claim 12, further comprises:

logging results of the delivery of the message in a history database.

15. A centralized notification system for over the air programming, comprising:

a central server that generates a message to be delivered to a mobile device; and

at least one passive server located in a region in which a mobile device is homed in communication with the central server that receives the message from the central server, the passive server in communication with a network element that communicates with the mobile device,

wherein the passive server monitors message traffic for an event that provides availability information about the mobile device and downloading the message to the mobile device in response thereto.

16. The centralized notification system recited in claim 15, wherein the availability is determined from an echo registration of a registration generated from a mobile device.

17. The centralized notification system recited in claim 15, further comprises logging results of the delivery of the message in a history database.

18. The centralized notification system recited in claim 15, receives the availability information about the mobile device without having to query the HLR.

19. The centralized notification system recited in claim 15, wherein the message can be created in response to various parameters, including implementing at least one of: administration changes to an intelligent routing database; a system change to a subscriber's profile; and changes by an accounting system server.

20. The centralized notification system recited in claim 15, wherein the central server generates and delivers the message to an active server in response to a new activation of a mobile device.

21. The centralized notification system recited in claim 15, wherein the at least one server includes multiple passive servers functionally servicing a geographic region.

22. The centralized notification system recited in claim 21, wherein the passive servers are distributed nationally.

23. The centralized notification system recited in claim 22, wherein the passive servers are distributed worldwide.

24. The centralized notification system recited in claim 15, wherein an echo registration is created and made available to a signal transfer point (STP).

25. The centralized notification system recited in claim 15, wherein the event from which availability information is obtained is chosen from at least one of: monitoring individual cell towers; monitoring an STP; monitoring a server; and monitoring traffic between an MSC and an HLR.

26. A method for maintaining and managing over the air programming to a mobile device, comprising:

- generating a message in a central server that is to be downloaded to the mobile device; and

- delivering the message to a passive server in a region in which the mobile device is homed,

- monitoring message traffic for an event that provides availability information about the mobile device and automatically downloading the message in response thereto.

27. The method of claim 26, further comprising logging results of the delivery of the instructions in a history database.

28. A carrier wave encoded to transmit a control program usable for a centralized notification system to a device for executing the control program, the control program including instructions comprising:

- instructions for generating a message in a central server that is to be downloaded to the mobile device;

- instructions for delivering the message to an active server; and

- instructions for querying a network element for availability information about the mobile device, wherein:

- if the availability of the mobile device is positive, directly routing the message to the mobile device,

otherwise, routing the message to a passive server, wherein the passive server monitors message traffic for an event that provides availability information about the mobile device; and

instructions for downloading the message to the mobile device in response to receiving the availability information.

29. The method of claim 28, wherein the attempt to locate and deliver the message is performed by the first server in which an HLR is queried for a registration that provides availability information about the mobile device.

30. The method of claim 28, further comprises:
determining availability information from an echo registration automatically sent to the network element, wherein the echo registration is a copy of a registration generated from a mobile device.

31. The method of claim 28, further comprises:
logging results of the delivery of the message in a history database.

32. A carrier wave encoded to transmit a control program usable for a centralized notification system to a device for executing the control program, the control program including instructions, comprising:

instructions for generating a message in a central server that is to be downloaded to the mobile device; and

instructions for delivering the message to a passive server in a region in which the mobile device is homed,

instructions for monitoring message traffic for an event that provides availability information about the mobile device and automatically downloading the message in response thereto.

33. A method of updating an intelligent routing database (IRDB) in a mobile device, comprising:

generating a message to be delivered to a mobile device;
delivering the message to an active server; and
querying a network element for availability information about the
mobile device, wherein:

if the availability of the mobile device is positive, delivering
the message to the mobile device and updating the IRDB,

otherwise, routing the message to a passive server that
monitors message traffic for an event to occur that provides availability
information about the mobile device; and

delivering the message to the mobile device in response thereto.